TAKEGAWA

US PAT

R-Stage+D/ Instruction Manual for Cylinder Set (106cc / SCUT)

Exclusively for our R-Stage+D

The ceramic-coated cylinder is used.
We coated the piston with molybdenum.

Item No.: **01－04－7004** (Cylinder kit)
01－02－0125 (Piston kit)

- Thank you for purchasing one of our products.
- This is a piston and 106cc SCUT cylinder set designed specifically for use with our R-Stage+D Head. The use of SCUT cylinder Kit can soup up your engine to 106cc without changing the crankshaft. Cylinder has an oil jet hole, which can lubricate and cool the piston and the connecting rod.

◎ **Please note: Illustrations and photos may vary from actual hardware.**

Read all instructions before starting the installation.

◎ We do not take any responsibility for any accident or damage whatsoever arising from the use of the products not in conformity with the instructions in the manual.
◎ We shall be held free from any kind of warranty whatsoever of products other than this product if the glitch takes place on the other products than this one after the installation and use of this product.
◎ This set is exclusively for R-Stage+D of our TAKEGAWA's manufacture.
◎ In some cases sounds coming from the cylinder may sound louder than stock.
◎ It is advisable to install an oil cooler for driving at a high outdoor air temperature.
◎ Please be informed that we shall be held harmless against any claim against us whatsoever arising out of use of the products in racing and the like.

⚠ Caution The following show the envisioned possibility of injuries to human bodies or property damages as a result of disregarding the following cautions.

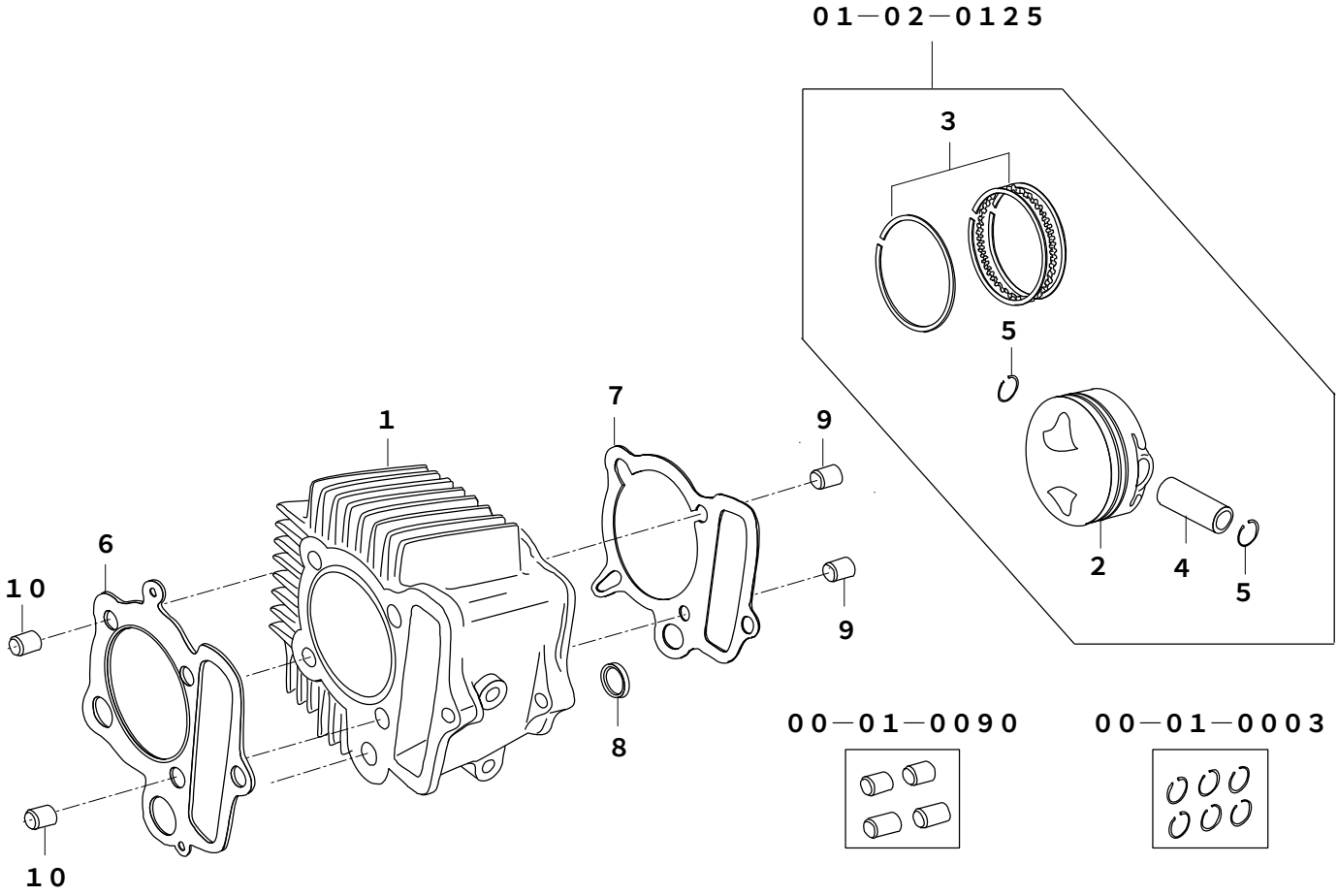
- Since this kit is designed and developed for driving in closed races, do not use the kit for running on public roads.
- Work only when the engine and the muffler are cool. (Otherwise, you will burn yourself.)
- Prepare right tools for the work, and do the work in the proper and right way.
  (Otherwise, improper work could cause breakage of parts or injuries to yourself.)
- As some products and frames have sharp-pointed or protruding portions, please work with greatest care. (Otherwise, you will suffer injuries.)

⚠ Warning The following shows the envisioned possibility of human death or serious injuries to human bodies as a result of disregarding the following cautions.

- Those who are technically unskilled or inexperienced are required not to do the work.
  (Improper installation due to unskilled technique or lack of knowledge could lead to parts breakage and consequently to accidents.)
- Always use new piston pin circlips, gaskets and sealings. (Wear and damage to these parts are likely to cause parts breakage and accidents.)
- Before doing work, place the motorcycle on level ground to stablize the position of your motorcycle for safety's sake.
  (Otherwise, your motorcycle could overturn and injure you while you are working.)
- If you find damaged parts when checking and performing maintenance of your motorcycle, do not use these parts any longer,
  and replace them with new ones. The continued use of these damaged parts as they are could lead to accidents.)
- Always start the engine in a well-ventilated place, and do not start it in an airtight place. (Otherwise, you will suffer from carbon monoxide poisoning.)
- Before riding, always check every section for slack in parts like screws. If you find slack ones, screw them up securely to the specified torque.
  (Or improper torque may cause parts to come off, leading to accidents.)
- When you notice something abnormal with your motorcycle while riding down a road, immediately stop riding and park your motorcyle in a safe place.
  (Otherwise, the abnormaility could lead to accidents.)
- As gasoline is highly flammable, never place it close to fire. Make sure that nothing flammable is near the gasoline.
  (Otherwise, there will be a danger of causing fires.)
- Check or perform maintenance of parts correctly according to the procedures in the instruction manual or a service manual.
  (Improper checking or maintenance could lead to an accident.)
- Never use any other part than the specified parts. (Otherwise, there is a possibility of parts breakage, leading to accidents.)
- Always use a torque wrench to screw bolts and nuts tight and securely to the specified torque.
  (Otherwise, improper torque may result in the breakage or coming off of the bolts and nuts, leading to accidents.)
- As the accumulation of vaporized gasoline is at the high risk of explosion, work in a well-ventilated place.
- Always use high-octane gasoline. (Otherwise, troubles such as engine knocking may cause accidents.)

◎ Please be informed that the product specifications, design and prices are subject to change without prior notice.
◎ We shall be held free from any guarantee whatsoever of any trouble caused by the combined use of our products with parts not specified by us.
◎ This manual should be retained for future reference.

～Kit Contents～



No.	Parts Name	Qty	Repair Parts Item No.	in packs of
1	Aluminum cylinder	1	01-01-0220	1
2	Piston (Molybdenum coated)	1	13109-RSH-T01	1
3	Piston ring set (top, oil)	1	13012-RAS-T00	1
4	Piston pin	1	01-00-0091	1
5	Piston pin circlip	2		2
6	Cylinder head gasket	1	01-13-0606	1
7	Cylinder gasket	1		1
8	Rubber packing (black)	2		1
9	Dowel pin, 8x12	2	00-01-0090	2
10	Dowel pin, 8x14	2		2

※When ordering a repair part of the piston alone, prepare the Item No. stamped on the piston top surface.

※Please order repair parts with the Repair Part Item No.
Without the repair part item No., we may not be able to provide the correct parts.
Some parts are only available as a set. Please order them with the set number.

※The Piston Kit (01-02-0125) contains the parts shown in the above enclosed square with the kit No.

SPECIAL PARTS TAKEGAWA Co.,Ltd.
3-5-16 Nishikiorihigashi Tondabayashi Osaka Japan
TEL : 81-721-25-1357 FAX : 81-721-24-5059
URL : http://www.takegawa.co.jp

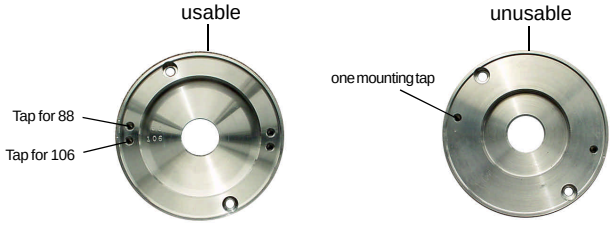
～Installation Procedures～

⚠ **Caution: Always be sure to tighten parts to the specified torque using a torque wrench.**

⚠ **Notice: The unskilled or those without proper knowledge are requested not to do the installation work.**

○The following show the products of our own make to which this kit cannot be installed.

◇On the use of an old-type inner rotar CDI



○Some products involve detachment and installation of an engine and sepration of a crank case, etc. Do the installation work infallibly, following Honda's genuine parts service manual.

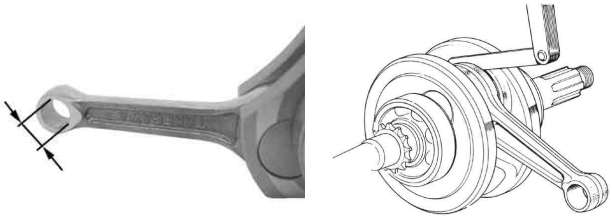
○Referring to the service manual, detach the engine from the frame and disassemble it.

o Check every part.

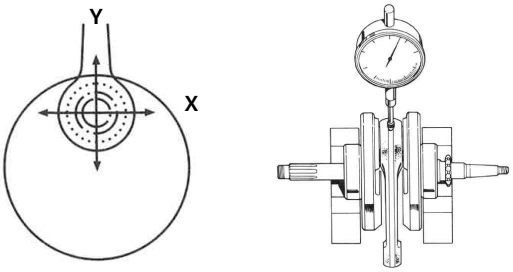
⚠Caution: Infallibly inspect every part and check consumable parts for damage and wear.

What to check:

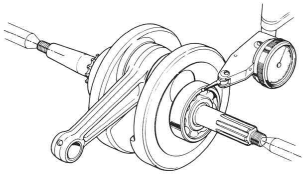
- Measure the internal diameter at the small end of the con'rod.
  ∴ If larger than 13.03 mm, replace it.
- Measure the clearance at the big end of the con'rod in the axial direction.
  ∴ If larger than 0.6mm, replace it.



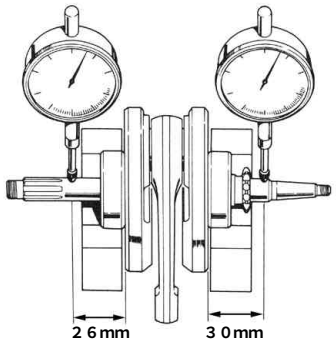
- Measure the misalignment at two points at the big end of the con'rod at right angles to the shaft as shown in the figure on the right.
  ∴ If larger than 0.05mm, replace it.



- Measure the misalignment on the journal bearing of the crank shaft.
  ∴ Shaft direction:If larger than 0.10 mm, replace it.
  Bearing direction: If larger than 0.05 mm, replace it.



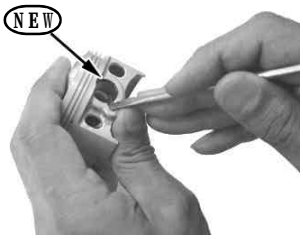
- Measure the deflection of the crank shaft.
  ∴ If larger than 0.10 mm, replace it.



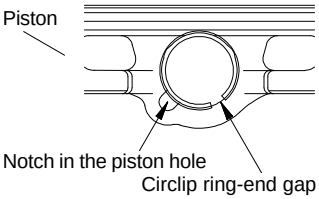
o Assemble the crank case referring to the service manual.

～Cylinder Installation Procedures～

○ Attach a piston pin circlip to one of two pin holes on the piston.

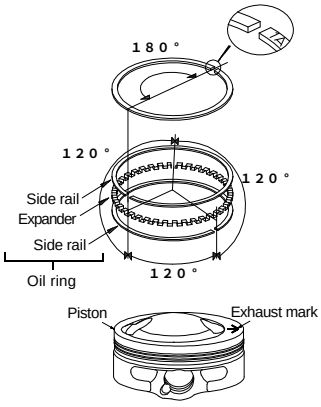


○Attach the piston pin circlip so the ring end gap does not meet with the notch on the piston pin hole, and it should be either on the top or at the bottom of the piston as illustrated in the fig. 1 below.



○ Air-blow the piston rings and the piston pin, and check for jamming of any foreign material by these parts.

○Apply engine oil to grooves for piston rings, and, with reference to the figure below, fix piston rings and arrange the location of piston ring end gaps.



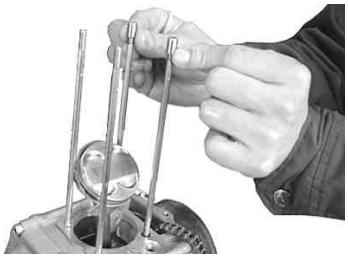
○ Apply molybdenum solution to the piston pin and the holes on the connecting rod small end.

○ Install the piston to the connecting rod so the IN mark on the piston faces the intake side.

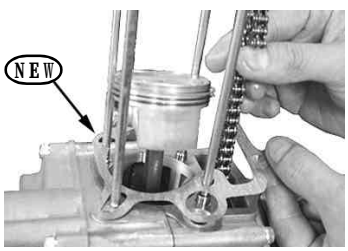
○Plug the sleeve hole and the cam chain hole on the crank case with a clean cloth, and fix a piston pin circlip.

○Remove the cloth used to plug holes.

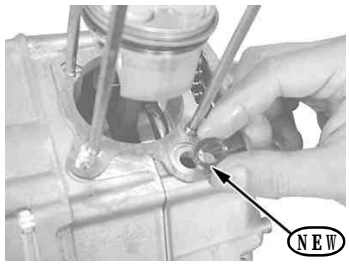
○ Degrease the cylinder base of the crankcase, and fix 8x12 dowel pins onto the dowel pin holes.



○ Fix a cylinder gasket of the kit into the cylinder base of the crankcase.

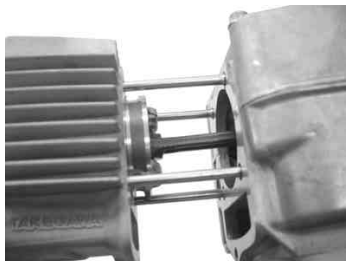


○ Fix a new rubber packing (black) of the kit onto the oil-return hole on the cylinder base of the crank case.



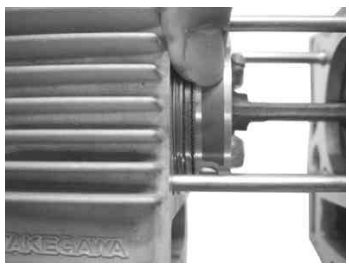
○ Apply engine oil to the entire inner surface of the aluminum cylinder bore.

○Insert the aluminum cylinder into the stud bolts.

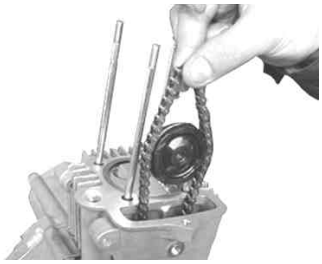


○ Compressing the piston rings, install the cylinder with care not to move the piston-ring end gaps out of place. Their end gaps will not be out of place.

⚠CAUTION: Be careful not to damage the piston rings.



○ Place the cam chain guide roller on the cam chains.



○ Loosely tighten the cam chain guide roller and the cylinder side bolt.

○Loosely tighten an original hex bolt which holds the crank case on the cylinder side.

○ Install the cylinder head with reference to the instruction manual.